

BRFSS – ANALYSIS OF THE ORAL HEALTH QUESTIONS (2001, 2002, 2003)

BEHAVIOR RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

INTRODUCTION

Behavior Risk Factor Surveillance System is the world's largest random telephone survey of non-institutionalized population ages 18 or older. It is used to track health risks in the United States. In 1981, the Centers for Disease Control and Prevention (CDC) in collaboration with selected states began the telephone based behavioral risk factor surveillance system to monitor health risk behaviors. As of 1993, participation in the BRFSS has expanded to include all 50 States, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. South Carolina began administering BRFSS in 1984. The basic philosophy is to collect data on actual behaviors, rather than on attitudes or knowledge, that is especially useful for planning, initiating, supporting, and evaluating health promotion and disease prevention programs.

The BRFSS questionnaire has three components. The **core questions** consisting of the (**fixed core, rotating core** and the **emerging core**), **optional modules** and **state added questions**. The core questions have to be asked by all the state health departments without any modification. States may use optional modules if they wish with or without modifying the questions. In addition, the State may also add questions addressing local priorities and behavior of interest.

Oral Health Section

The BRFSS (2001, 2002, 2003) Oral health module consisted of three questions.

1. *How long has it been since you last visited a Dentist or Dental clinic for any reason?*
2. *How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.*
3. *How long has it been since you had your teeth cleaned by a Dentist or Dental Hygienist?*

Data obtained from the above questions was used to create statewide estimates by race, age, gender, educational and household income levels. This information is also available for public health districts. These reports are available at http://www.scdhec.gov/hs/epidata/state_reports.htm.

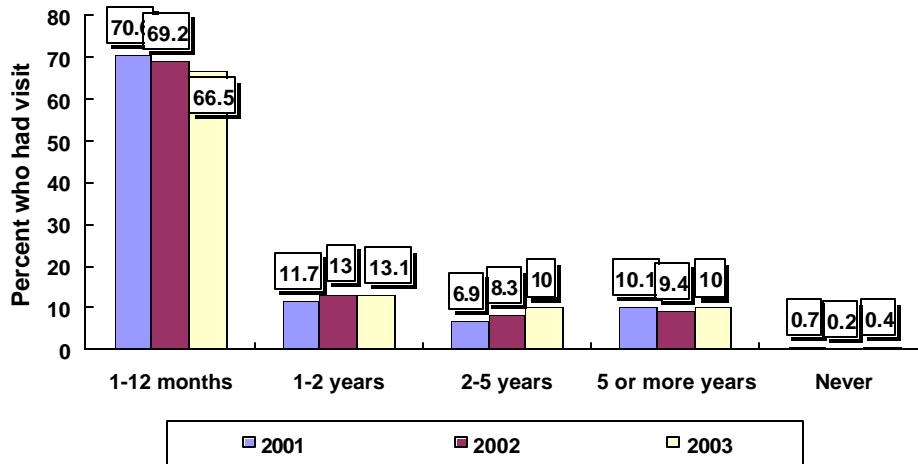
The current report endeavors to compare statewide data for the years 2001-03 for identifying oral health trends and practices that exist in South Carolina is adult population. These insights will aide in planning, implementing, and evaluating oral health promotion and disease prevention programs for the state's adult population.

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Question 1 - How long has it been since you last visited a Dentist or Dental clinic for any reason?

Figure 1

Last dental visit comparison (2001, 2002, 2003)



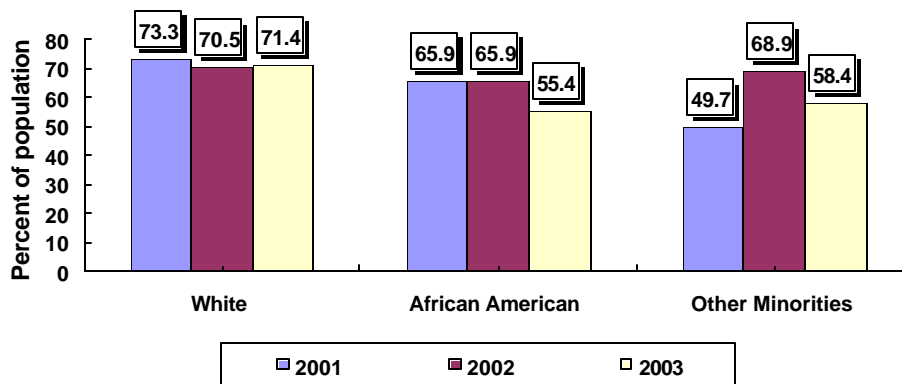
Key Findings:

- Most of the adult population in the BRFSS survey had visited a dentist or dental clinic in the past year. There was a slight decline seen in the “1-12 month” category from 01 to 03, the difference was not significant. A very small proportion of people had either never seen a dentist and about 10% had their last visit 5 or more years before.

By Race:

Comparison between 2001, 2002 and 2003 (1- 12 months since last dental visit).

Figure 2



Key Findings:

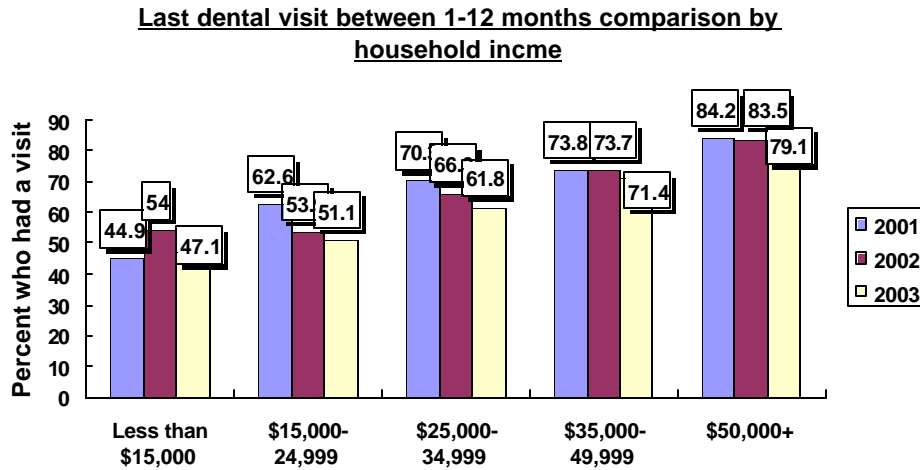
- The proportion of African Americans who had a dental visit during the past year is very close to the white adult population for the years 2001 and 2002. In 2003, a decrease of approximately 10% is seen among

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African Americans. The same trend is not seen in the white population. Significantly, less African Americans visited a dentist or a dental clinic in the year 2003.

Question 1 by household income (Socio-economic status)

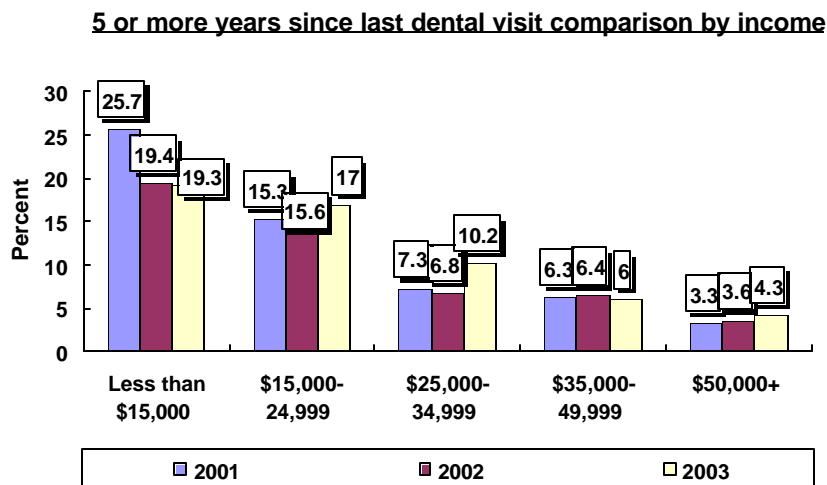
Figure 3



Key Findings:

- There was a gradual increase in the proportion of the people, who had a dental visit in the past year as household income increased. Further analysis was done by combining the lowest two categories (< \$15,000 and \$15,000-25,000) and the highest three categories (\$25,000-34,999, \$35,000-49,999 and \$50,000+). The former was labeled as low income and the latter was labeled as high income. On comparison, adults in high income were significantly more likely to have had a dental visit in the past year than low income. This relationship was less significant when the upper two levels (\$35,000 – 49,999 – 50,000+) of household incomes were compared.

Figure 4

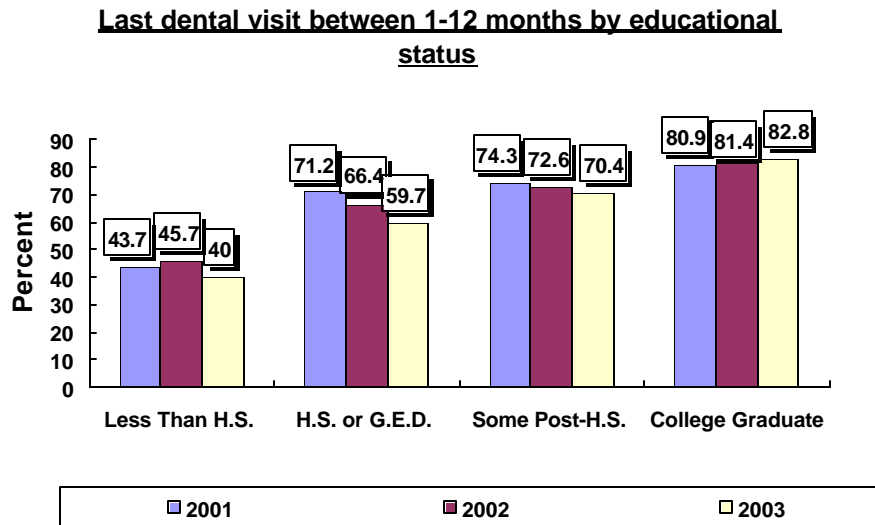


- There were significantly more people in the low SES that hadn't had a dental visit in the past 5 years as compared to people in the high SES.

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Question 1 by educational status

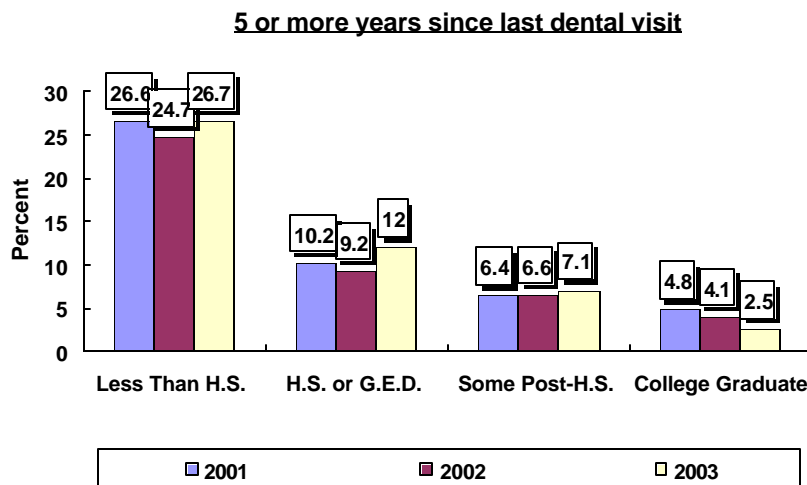
Figure 5



Key findings:

- Adults without a High school diploma were significantly less likely to have gone for a dental visit than the High school and above group. This association is weaker when adults with high school education are compared with Post High school or College graduates. However, in the 2003 survey the percentage of dental visits for high school graduates decreased to 59.7%, significantly less than with Post HS, or College group.

Figure 6



Key Findings:

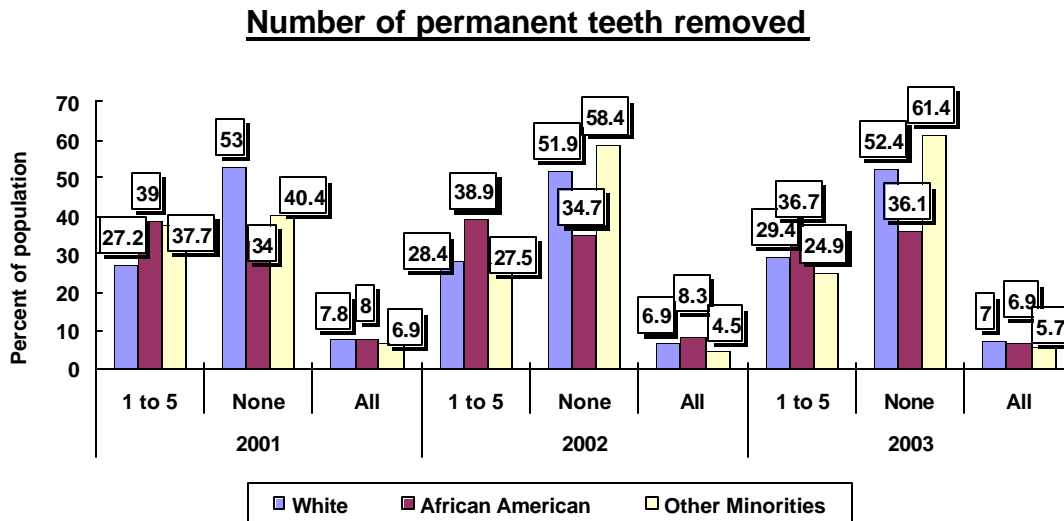
- Higher proportion of people with less than high school education had not had a dental visit in the last 5 years as compared to people with high school and above education. This association is statistically significant. When making the comparison of high school graduates with Post H.S and college graduates this association becomes weaker, showing that a large gap exists between less than the H.S education group and the rest of the population

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Question 2 - How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.

Comparison by race

Figure 7

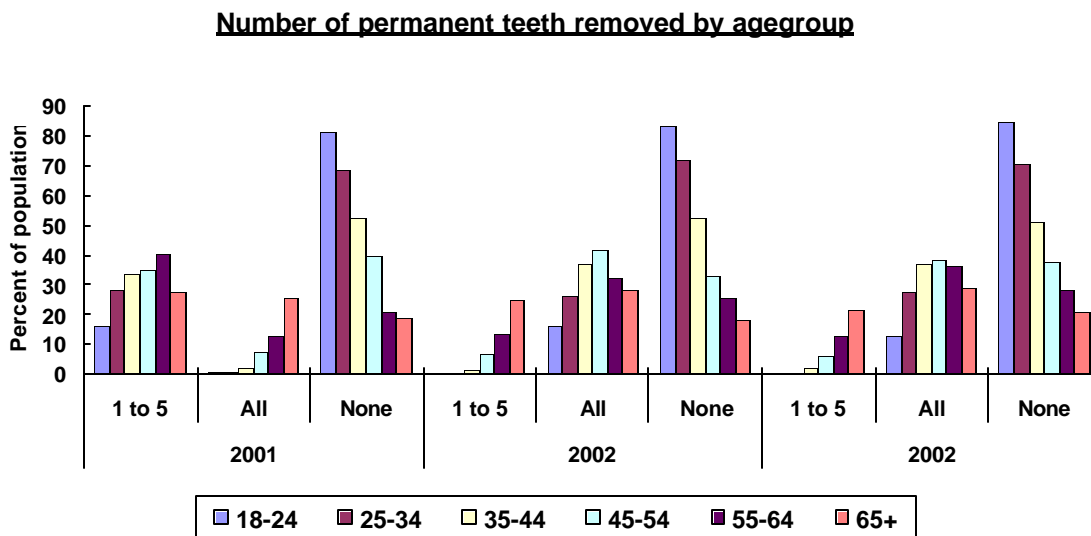


Key Findings:

- A higher proportion of African American adults had at least 1 to 5 of their teeth removed compared to the white population. Surprisingly, the percentage of adults in other minority groups with 1 to 5 teeth removed was very close to the white population especially for 2002 and 2003. This difference can be explained by looking at the racial comparison graph for the previous question ([figure 2](#)). This graph shows a declining number of visits for minorities in the year 2002 and 2003, which suggests that the decreasing rates of teeth being pulled in minorities can be largely attributed to their diminishing access to a dentist or a dental hygienist rather than to improved oral health.

Comparison by age group

Figure 8



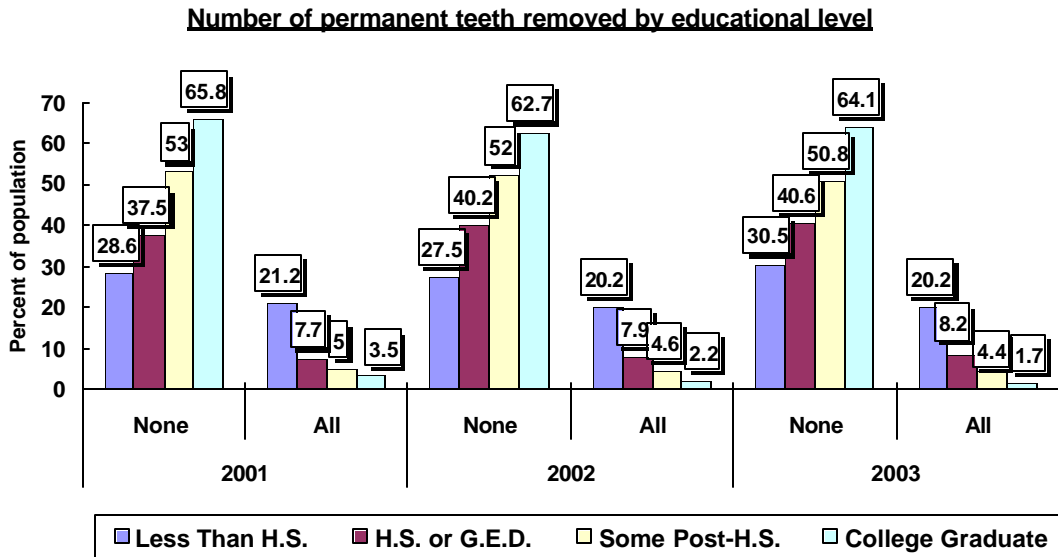
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Key Findings

- The purpose of figure 8 is to illustrate a trend in the different age groups. The percentage of people with 1 to 5 teeth missing increased steadily from the youngest age group (18 – 24 years) until age group (55-64) and after that there is a decrease seen in the oldest age group (65+). This difference is explained by a corresponding increase in the percentage of adults aged 65 or above with all their teeth removed. Similarly, a steady decline is seen in the percentage of adults with all their teeth intact as they grew older.

Comparison by educational level

Figure 9



Key Findings:

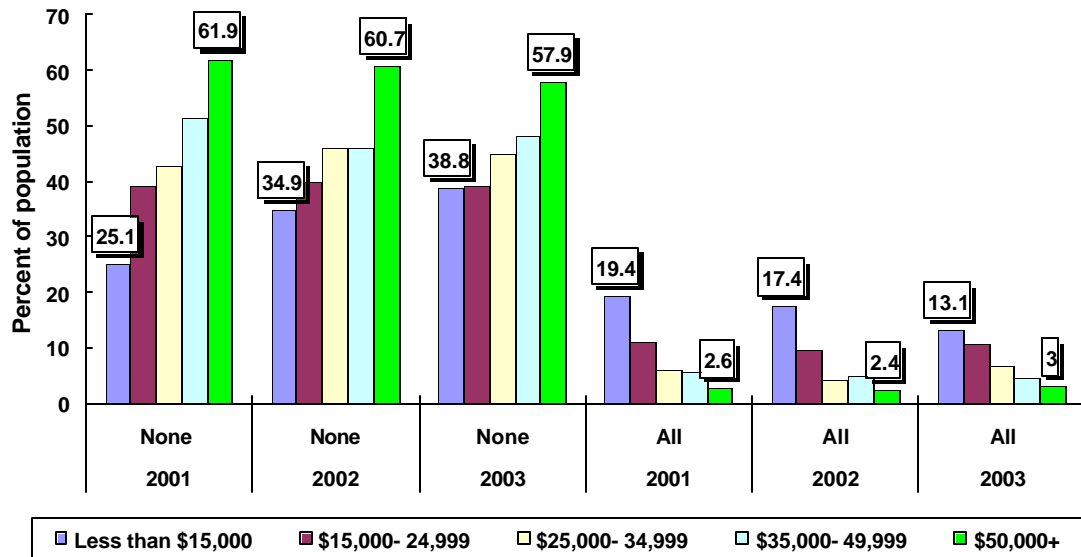
- The question regarding the number of teeth removed due to gum or tooth disease had four responses (1 to 5, 6 or more, none, or all teeth). For the purpose of comparing different educational groups only the best (all teeth present) and the worst (all teeth removed) conditions were taken into account. A statistically significant difference was observed between the less than H.S group and all the other educational groups combined having either none or all the teeth removed. Again, a big difference was perceived between less than H.S group and the rest of the population (H.S, Post H.S, College graduate). Interestingly, on comparing the proportion of people with 1 to 5 teeth removed between different educational levels no significant relationship was observed between the less than H.S education group and the college graduates. The reason for this resides in the fact that the majority of the people in both of these populations lie on the either extremes (All teeth removed vs. none removed)

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Comparison by income level

Figure 10

Number of permanent teeth removed comparison by Income



Key Findings

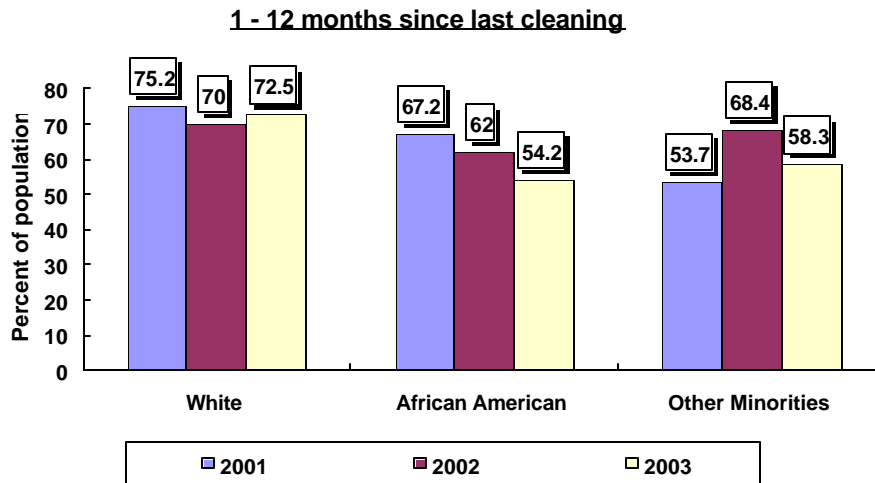
- Although a significant difference was observed between the lowest income population (< than \$15,000) and the highest income (> than \$50,000) population, the trend is opposite in both the populations. As can be observed from Figure 10, the proportion of lowest income adults with none of the teeth removed are rising while the proportion of adult population in the same category with highest income level is steadily on the decline. Similar trends can be observed in the “all teeth removed” category

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Question 3 - How long has it been since you had your teeth cleaned by a Dentist or Dental Hygienist?

Comparison by race

Figure 11

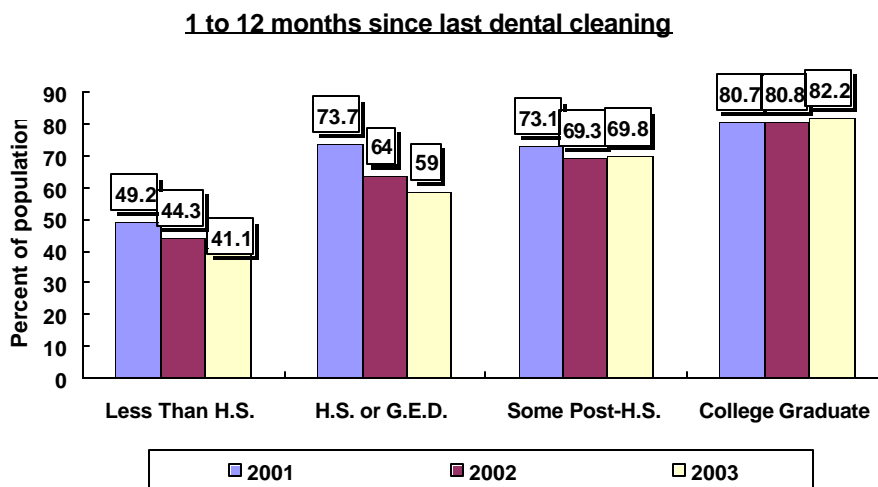


Key Findings

- The proportion of African American, who had their teeth cleaned in the past year, is decreasing as compared to the White population. In fact this difference becomes highly significant in 2003.

Comparison by educational status

Figure 12



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Key Findings

- The population in the “less than H.S” category is significantly less likely to have their teeth cleaned during the past year. The difference become less significant as the education level of the population increases. Again, as was seen in the previous questions, a large gap is observed between “less than H.S” group and the rest of the population. However, while the Post H.S and the college graduates have similar rates over the three years, a sharp decline is observed in the “H.S or G.E.D” category rates.

Comparison by income levels

Figure 13



Key Finding

- People, who are living in the household with less than \$15,000 and less than \$25,000 per year incomes are significantly less likely to have their teeth cleaned as compared to higher income group. Over the three years period, steady rates are observed only in the “\$35,000 – 49,000” and “50,000 +” populations. The rest of the population shows a steady decrease in their rates.